Wenatchee River Watershed - WRIA 45

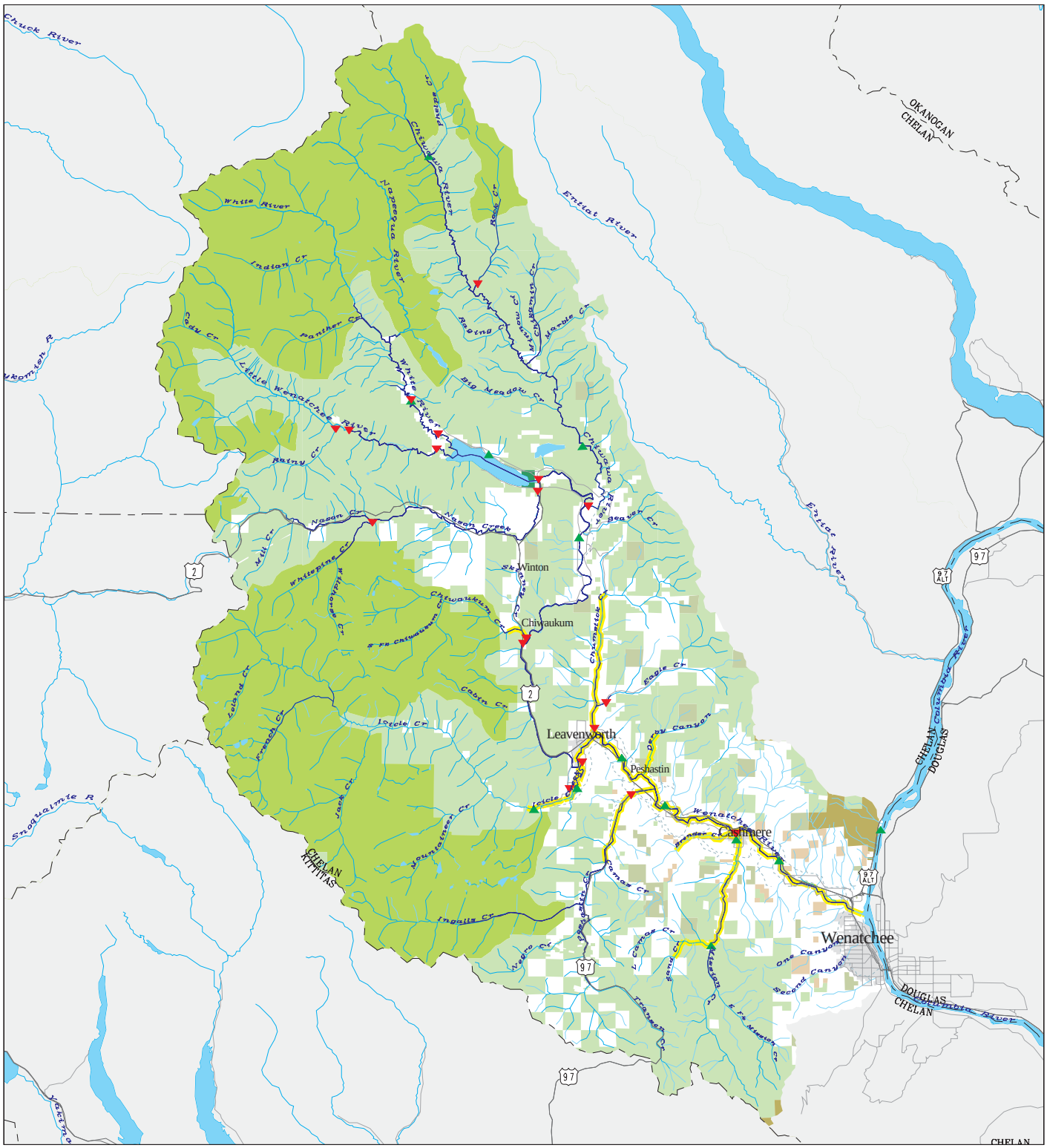
Low instream flows and dewatering occur naturally as a result of climatic and geological conditions within smaller tributaries of the Wenatchee River Basin. While further data collection and analysis is needed to further identify the extent at which water diversions affect instream flow in some sub-basins, the effect of surface diversions in some tributaries is evident. Low instream flows during late summer months are common in some tributaries and there appears to be significant annual flow variation. During years of low snowpack and drought, low flow periods limiting to salmonids can begin earlier and extend later in the season, due to surface water withdrawals.

Low stream flows are limiting to rearing and adult passage in Chumstick, Mission, Sand, Brender, and Peshastin Creeks as well as the lower Icicle Creek. Flows are recognized as a significant limiting factor in Peshastin Creek. The Peshastin Irrigation District Diversion at RM 4.8 contributes significantly to low flows or dewatering, resulting in a migration barrier and loss of rearing habitat. Flow restoration is determined to be a priority to provide access for bull trout and spring chinook.

The Icicle/ Peshastin water diversion at RM 5.7 on Icicle Creek contributes significantly to low flows and elevated temperatures throughout the lower stream reach. Adult salmonid passage and rearing habitat are significantly impacted by this diversion.

Derby Canyon Creek is a small stream which is annually dewatered below RM 1. There are 0.4 cfs of surface water rights and claims for another 1.1cfs. It is suspected that these diversions contribute to dewatering of the lower reaches of the creek, resulting in passage barriers and lost rearing habitat. While small sub-basins like Derby Canyon Creek have little potential to contribute significantly to the total production potential of the basin, little water is required to restore them, and they may provide critical refugia for rearing salmonids in some flow conditions.

Improving summer and early fall instream flows to increase available rearing habitat is recognized as a priority for restoration in the main stem Wenatchee River. For the purposes of the Water Acquisition Program, water acquisition in the mainstem Wenatchee is not a priority as it is unlikely that sufficient water or funding is available to measurably increase available rearing habitat.



Stream Flow Prioritization: Wenatchee WRIA 45

Water Resources Program

WASHINGTON STATE DEPARTMENT OF ECOLOGY

GIS Technical Services
12/13/02
sfp45-mpla

- US Forest Service
- US Wildlife Refuge
- US Parks/Recreation
- USFS Wilderness Area
- Bureau of Land Management
- US Dept. Defense/Energy
- Wa. Dept. of Fish & Wildlife
- Wa. Dept. of Naural Reasources
- State School/Hospital/Prison
- Wa. Parks & Recreation

- City/County Watershed/Park
- Tribal Lands
- Incorporated City

- USGS Stream Flow Gage
- Ecology Stream Flow Gage
- Water Right Purchase

Miles
0 4 8

- Low priority stream
- Medium priority stream
- High priority stream
- Salmon/Bull Trout Spawning/Rearing area
- Other streams
- Canal/ditch/pipe
- County
- Highway
- Local Paved Roads

N

Subject to Revision

WDNR/Ecology - Major Public Lands 2002 100k
WDFW/Ecology - Hydrography, 2000 100k
Ecology - WRIA, 2002 24K
WDOT - Transportation, 2001 24K
WDFW - Stream Flow Prioritization 2002
WDFW - Spawning/Rearing Areas 2002 100k
USGS/Ecology - Stream Gages 1:100k